



DEPARTMENT OF THE ARMY
HEADQUARTERS, US ARMY ACCESSIONS COMMAND AND FORT KNOX
1600 SPEARHEAD DIVISION AVENUE, DEPARTMENT 600
FORT KNOX, KENTUCKY 40122-5600

REPLY TO
ATTENTION OF:

IMSE-KNX-SO

6 October 2010

MEMORANDUM FOR

Commanders, All Units Reporting Directly to This Headquarters
Commanders, Fort Knox Partners in Excellence
Directors and Chiefs, Staff Offices/Departments, This Headquarters

SUBJECT: FY 2011 Winter Safety Campaign

1. References:

- a. AR 40-5, Preventive Medicine, 25 May 07.
- b. TB MED 508, Cold Injury, 1 Apr 05.
- c. FM 31-70, Basic Cold Weather Manual, 12 Apr 68.
- d. TM 10-4500-200-13, Operator's Organizational and Direct Support Maintenance Manual, 10 Dec 69, w/Change 19, dated 30 Nov 04.
- e. Fort Knox OPLAN 1-07 (Fort Knox Snow And Ice Plan), 23 May 07.
- f. FM 5-19, Composite Risk Management, 21 Aug 06.
- g. GTA 05-08-012, Individual Safety Card, 1 Dec 05.
- h. TM 9-4520-257-12&P, Operator's and Unit Maintenance Manual Heater, Space, Radiant, Large (H-45), 30 Sep 03.
- i. TM 10-4520-264-12&P, Operator's and Unit Maintenance Manual Heater, Space, Convective, 5 Mar 07.
- j. AR 600-55, The Army Driving and Operator Standardization Program, 18 Jun 07.

2. The purpose of this campaign is to ensure the safety of Soldiers, civilian employees (including full time contractors), and Family members during the winter season. This campaign

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targets three areas that generally bring about an increase in accidents and injuries: cold weather, slippery surfaces, and fire/carbon monoxide hazards.

a. Cold weather injuries include trench foot, where the symptoms include itching, numbing, or tingling pain with the feet becoming swollen, and turning faintly red, blue, or black; frostbite, where the skin becomes numb, turns gray or waxy-white in color, cold to the touch, and may feel stiff; and hypothermia, which is a medical emergency where the individual may experience confusion, bizarre behavior, and withdrawal from group behavior, and may become unconscious with nearly undetectable breathing and pulse.

b. Slippery walking and driving surfaces are a leading cause of accidents at Fort Knox in the winter season. The greatest number of these occur on parking lots and sidewalks. The first order of business is to clear them of ice and snow; it is also important to conduct risk assessments and communicate the hazards to personnel.

c. Many fires and carbon monoxide incidents can be traced to faulty equipment or maintenance shortfalls. Combine this with a failure to follow procedures, such as sleeping in a vehicle with the windows closed, and the results are often deadly.

3. Success depends on early planning and completion of the actions in paragraph 4 to ensure hazards are identified and risks mitigated. Recognizing that training is a Commander's program, the following key events and actions are recommendations critical to making this campaign effective.

a. **Command Information.** The Garrison Safety Office (GSO) will use several resources, i.e., KNOXINFO, the Turret, Fort Knox Television, Safety Alerts, safety councils, and the GSO web page to provide winter safety information in a timely manner. Units and organizations are encouraged to use this information to support and enhance unit safety councils, driver training programs, pre-holiday briefings, and winter-season safety training plans.

b. **Weather Information.** Accurate and timely weather information is essential for use in planning and conducting training and other outdoor activities. The Fort Knox Weather Operations is responsible for providing cold weather information; they are available 24 hours a day, phone 624-5653/5517. If a snow/ice storm occurs during duty hours, military personnel will remain at their post until released by the Fort Knox Garrison Commander. All civilian employees on post are encouraged to remain at their work site until released IAW Fort Knox Reg 600-11. Family members residing on post are encouraged to remain in their homes and monitor channel 98 television for updates on weather and road conditions. Emergency vehicles and emergency support personnel are exempt from these restrictions.

c. **Training and Education.** All personnel subject to working or training in environments that could result in cold injuries will receive training by 1 Nov 10. This training will include

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information on the prevention, recognition, and prompt treatment of cold injuries. Environmental Health, MEDDAC, conducts cold weather injury prevention classes, phone 624-5371/5343/6324. Train Soldiers on cold injury prevention in accordance with master training schedules and programs of instruction. Driver training programs must include hazards that a driver might encounter during the winter season. Include instruction on proper slave/jump starting procedures, tire chain use, and increased stopping distances on ice and snow. Guidance to conduct cold weather injury prevention training is in TB Med 508; training guidance for military equipment and tracked and wheeled vehicles is in AR 600-55 and AR 385-10. Stress good diet and water consumption during the winter months; it is as important to cold injury prevention as it is to heat injury prevention.

d. Vehicle and Equipment Preparation. Special care must be exercised to ensure vehicles and equipment are prepared for operation in cold weather. Heaters, windshield defrosters, batteries, tires, antifreeze, lubricants and oils, and exhaust systems require special attention. Other equipment, e.g., space heaters, warming barrels, and immersion heaters, must be inspected and repaired by 1 Nov 10 so that it is ready for use. Upon final mowing of the season, all lawn mowers and weed eaters will be cleaned and stored in authorized locations.

e. Snow and Ice Removal. Driving and walking surfaces, as well as vehicle surfaces, must be cleared of ice and snow. DPW is responsible for snow/ice removal from streets, range roads, Godman Army Airfield, and selected parking lots. Rock salt for use on sidewalks and parking lots is available in bulk at Bldg. No. 101, Dixie St. A non-salt based ice melting agent for use on steps and sidewalks US government buildings is available at DPW Troop Self Help, phone 4-8443., Bldg. No. 72, Quartermaster St. Ice melt for use on steps and sidewalks for residents living in Knox Hills family housing areas can be obtained at their neighborhood community center. Pre-position ice melting agent at building entrances by 1 Nov 10. Personnel must be cautioned to use extreme care when mounting, dismounting, or walking on vehicles; first-line leaders will place greater emphasis on the 3-point contact rule to prevent slips and falls.

f. Fire Prevention. Use of nonstandard heaters is prohibited in both the cantonment and the range/training complex. Heating devices must be inspected and, if necessary, repaired well before the start of heating season. Faulty equipment and maintenance shortfalls are a factor in many winter fires. Spare parts must be on-hand to repair faulty equipment. Personnel must be trained on the proper setup, refueling, and operation of field stoves and immersion heaters by a qualified person from the unit by 1 Nov 10; training guidance is in AR 600-55 and TM 10-4500-200-13. Fire reporting procedures, fire extinguisher operation, and emergency evacuation drills must also be part of the overall fire prevention plan. The Fort Knox Fire Department will assist with fire prevention training, fire extinguisher operator training, and evacuation drills; phone 4-6016. Knox Hills will ensure all fireplaces within their homes are inspected, cleaned, repaired/replaced (possibly shut down if deemed not safe) during their annual preventative maintenance program.

g. **Carbon Monoxide (CO) Poisoning Prevention.** Faulty equipment and falling asleep in a vehicle with the engine running are the primary causes of carbon monoxide poisoning. Proper ventilation is the key to preventing CO injuries and deaths. The Fort Knox policy is that no one will sleep in a vehicle with the engine running, or sit in a closed, unventilated vehicle with the engine running. If mission or training requires a person to be inside a vehicle with the engine running, a window will be rolled down for ventilation. Commanders will ensure equipment and vehicle ventilation and exhaust systems are inspected and repaired by 1 Nov 10. Training must address sleeping policies; and first-line leaders will enforce the Fort Knox policy concerning personnel in vehicles with the engine running.

h. **Field Heaters.** Commercial portable heating devices used in field training and operations expose personnel to both a fire hazard and hazards from carbon monoxide, sulfur, carbon and nitrogen dioxide and propane. If not properly vented, even low concentrations of these poisonous gases may cause death. Therefore, nonstandard or locally purchased heaters will not be used. The only approved heaters are those listed in references 1d, h and i above, the Army's Family of Space Heaters (FOSH), and those installed as part of an approved DPW or Corps of Engineers construction project. The following applies to the use of all field heating devices:

(1) Heaters will be set up per appropriate technical and operator manuals by competent individuals familiar with leak test procedures. An inspection by the unit fire marshal or safety officer will be performed before use.

(2) Only heaters with a ventilation system that is compatible with the shielded tent vent stack openings will be used in areas where personnel sleep. Heaters will be equipped with emergency fuel shut-off and situated on a firm and level fireproof base. A 4-foot area around the heater and vent pipe will be maintained clear of combustible material.

(3) Where applicable, fuel tanks will be located outside the tents or shelters. Fuel lines will be protected from damage; under no circumstances will heaters be operated with fuel line leaks.

(4) Only authorized fuels will be used. Different types of fuel will not be mixed.

(5) Heater operators will be trained, tested, and licensed.

(6) A fireguard will be awake and on duty in tents and areas where field heaters are used. The fireguard will be briefed on watch procedures, fire fighting with appropriate extinguishing agent, fire emergency notification procedures, and early recognition of carbon monoxide poisoning.

(7) Heaters will not be operated while unattended.

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i. **Cold Weather Gear.** Serviceable, properly fitting clothing and footwear are essential to preventing cold weather injuries. Cold weather gear must be kept clean and dry. Special precautions must be taken with the feet, hands, and face since they are more susceptible to cold injury. Provide adequate protection, dress in layers, and ensure personnel stay dry, e.g., change socks and warm feet as necessary. Unit range safety officers, NCOs, and on-site medical support personnel will continuously oversee and enforce the proper use of cold weather gear.

j. **Risk Management.** Eliminating winter hazards or mitigating risk to the lowest level possible must be a primary consideration. Use the five-step risk management process in FM 5-19 to identify and assess hazards, and mitigate risk. Commanders will ensure cold weather training includes refresher training for leaders and supervisors on preparation and use of the Composite Risk Management (CRM) Worksheet, DA Form 7566. The CRM Worksheet will be very specific in identifying hazards and controls. If necessary, training will be modified to ensure risk is at an acceptable level. Risk assessments must be conducted daily, signed and dated, and maintained at the training site.

4. Responsibilities:

a. Garrison Safety Office (GSO).

(1) Provide Public Affairs Office (PAO) with winter safety information for use on Fort Knox Television and in the Turret. Begin in October and continue throughout the winter season.

(2) Provide safety alerts on KNOXINFO to keep personnel aware and abreast of critical winter safety issues.

(3) Provide posters, handouts, and information to support unit cold injury prevention programs.

(4) Provide assistance and input where necessary for units and organizations to complete their winter safety plans/programs.

(5) Conduct training site inspections when ranges are occupied to ensure cold weather safety requirements are followed; provide feedback to unit commanders.

b. Director, Directorate of Public Works (DPW).

(1) Review current Fort Knox Snow and Ice Plan to ensure up to date information and provide comments and recommendations to Directorate of Plans, Training, Mobilization, and Security (DPTMS).

(2) Inspect and repair or replace, as necessary, snow/ice removal equipment; ensure operators are trained and qualified by 1 Nov 10.

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(3) Order salt/sand for use on driving/walking surfaces by 1 Nov 10. Maintain rock salt at Bldg. No. 101 throughout the winter season for self-help issue to troop units.

(4) Stockpile salt by 1 Nov 10 for elimination of hazardous conditions until proper snow clearance operations can be performed.

(5) Supervise and control all snow and ice removal operations and equipment on streets, range roads, Fort Knox access/egress gates, selected parking lots, and airfield facilities.

(6) Contact Forestry for chain saw operator training for unit personnel upon request, phone 4-5070.

(7) Inspect and winterize gate-guard facilities at all Fort Knox access/egress points by 1 Nov 10.

c. Directorate of Emergency Services (DES)

(1) Assess the condition of installation road networks based on reports submitted to the MP Desk Sergeant by operational MPs, security guard force, and local police. Provide an assessment and a road condition classification recommendation to the Installation Operations Center (IOC) for forwarding to the Garrison Commander. Concerning range complex roads, DPTMS Range Division will determine road condition classifications in coordination with DES.

(a) GREEN. No restrictions.

(b) AMBER. Proceed with caution. Roads have been cleared or snowfall is light. There may be patches of ice and snow on the roads. Tire chain requirement is at the discretion of the vehicle commander.

(c) RED. Roads are covered with a thin sheet of ice or snow and are extremely hazardous. At a minimum, chains are required on the drive wheels of all vehicles. Commanders are encouraged to limit travel to mission requirements. Drivers should be selected based on winter driving experience, vehicle operating experience, and the route/distance to meet their mission. Track vehicles will not operate on icy roads or areas considered dangerous by the unit commander.

(d) BLACK. Not considered passable. Only vehicles in support of the installation snow and ice removal operations and those responsible for picking-up emergency essential personnel are authorized on installation roads and streets. Chain requirements for these vehicles are the same as those stipulated for "RED." Vehicles used to support range operations/training are authorized to continue providing support to those units using ranges or returning to garrison.

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(2) During periods of freezing rain, all traffic on Fort Knox may be restricted to emergency vehicles only. The Fort Knox Garrison Commander in coordination with the Commander DES will determine if traffic is to be restricted. If traffic is restricted, the Commander DES will enforce this restriction until Fort Knox streets and roads are considered safe.

(3) Provide ongoing traffic reports (every 30 minutes under RED road conditions and every hour under AMBER road conditions) to the IOC.

(4) Provide reports of trouble spots (bridges, underpasses, slick spots, gate areas, etc.) to the IOC for direction of snow/ice removal assets. Provide traffic control assistance to DPW during snow removal operations.

(5) Fire Department - schedule and conduct fire extinguisher training year around; and conduct a fire prevention campaign which includes exit drills, smoke detector operation, and fire inspections by 1 Nov 10.

d. Directorate of Plans, Training, Mobilization, and Security (DPTMS).

(1) IOC notify DPW Surface Maintenance Work Control (4-7286) for clearance of snow/ice. Coordinate with DPW to establish priorities for clearing snow/ice from range roads.

(2) During normal duty hours, disseminate to the command, snow clearance and ice control alerts and periodic road condition reports. Provide the PAO with this information for release to local media for delays and closures.

(3) During nonduty hours, ensure the IOC disseminates road condition information to the command.

(4) When road condition classification becomes AMBER, notify the Chiefs of Staff of all resident units and Commands, Garrison Commander, and the PAO. During nonduty hours, the IOC will do this.

(5) Range Branch has established the following procedures which have been long standing at Fort Knox and will be followed:

(a) Fires in warming barrels are permitted during training at ranges and outdoor training areas when the temperature is 45 degrees Fahrenheit or below or when dampness or wind warrants their use. Each bivouac and range site will request as needed warming barrels from Range Branch to provide for the normal number of personnel using each site. (As a guide, one warming barrel can be used to each 40 persons.) Open fires are not permitted any

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place in the Fort Knox training complex. All fires must be enclosed in warming barrels or other approved containers, and located at least 25 feet from facilities or structures.

(b) Units are responsible for providing firewood (no other type fuel is authorized in warming barrels) for their own use on all ranges/training sites. Due to the toxicity of pentachlorophenol (PCP) and its vaporization potential when heated, ammunition boxes and pallets will not, for any reason, be used as firewood.

(c) Fireguards will be posted when warming barrels are in use.

(d) Complete winterization is accomplished by erecting tents and installing stoves and warming barrels. Using units are responsible for erecting tents and stoves.

(e) Units will ensure that ranges where tents have been erected are equipped with adequate stoves per tent.

(f) Tents and stoves will be installed and operated per applicable TM. Leaders will brief all personnel in the use and safety of stoves and warming barrels. Sufficient fire extinguishers (10 pounds) will be readily available and located in the vicinity around stoves and warming barrels.

(g) Many areas have range buildings large enough to be used in lieu of tents. Units desiring to use these facilities must make prior coordination with Range Branch, DPTMS.

(6) Review and update as necessary the current Fort Knox Snow and Ice Plan.

e. Public Affairs Officer (PAO).

(1) Publish winter safety information in the Turret and KnoxInfo.

(2) Maintain winter notification codes for off-post media advisories.

f. Station Manager, Fort Knox Weather Operations.

(1) Issue weather warnings/advisories when:

(a) Two or more inches of precipitation is expected in a 12-hour period.

(b) Wind chill temperature drops below 0 degrees Fahrenheit.

(c) Temperature drops below 15 degrees Fahrenheit.

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(2) Provide updates (issue observed weather advisories) when temperature is below 15 and the wind chill is less than 0 degrees Fahrenheit. Outside training will be discontinued when wind chill temperature is below minus 10 degrees Fahrenheit. Provide key leaders specific weather updates as needed/requested.

g. Commander, MEDDAC

(1) Publish cold injury prevention memorandum by 1 Nov 10.

(2) Conduct cold injury prevention classes upon request from units and organizations. This training can be coordinated by contacting Environmental Health, phone 624-5371/5343/6324.

(3) Investigate all potential cold injury cases and report as required.

(4) Report all confirmed cold injuries to the unit of the injured Soldier, the Fort Knox IOC and to the Army Medical Surveillance Activity (AMSA) Reportable Medical Event System (RMES).

h. Commanders/Directors, all units and organizations (includes Active and Reserve Component and other units training on Fort Knox).

(1) Always consider weather and road conditions, fire hazards, and carbon monoxide hazards when conducting risk assessments for winter training activities.

(2) When TMP bus schedules are cancelled due to road conditions, units may reschedule by phoning 624-1215. Buses will make pickups in the order they were originally scheduled.

(3) Appoint and have on orders, a cold injury prevention officer or NCO at battalion and above.

(4) Conduct training on cold injury recognition, first aid, and preventive measures by 1 Nov 10. Conduct refresher training at least monthly during the cold weather season.

(5) Employ the buddy system; since Soldiers do not always recognize or react to their own early symptoms of cold injuries, they must be taught to observe their buddies for evidence of overexposure to cold.

(6) Issue Soldiers serviceable, properly fitting clothing and footgear for cold weather. Provide civilian employees clothing and footgear per the negotiated agreement.

(7) Tailor schedules to fit weather conditions by scheduling indoor activities during severely cold weather; provide frequent warm-up breaks when personnel must be outside.

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(8) Identify Soldiers with prior cold injuries and attach a 2-inch by 4-inch piece of white engineer tape to their canteen holder; exercise caution in exposing them to hazardous wind chill conditions since they are more susceptible to subsequent cold injuries.

(9) Investigate and report cold weather injuries to ensure errors are identified and corrected.

(10) Conduct preventive maintenance on field heating stoves and immersion heaters to ensure they are fully operational by 1 Nov 10. Use only authorized heaters operated by trained, licensed personnel.

(11) Train, test, and license personnel identified to operate field heating equipment by 1 Nov 10.

(12) Remove snow and ice from vehicle windows and surfaces before operating vehicle; clear sidewalks and steps of snow and ice before the start of each work day; and remove icicles, as they accumulate, from eaves above building entrances.

(13) Pre-position ice melting agent at building entrances by 1 Nov 10 for use on steps and sidewalks.

(14) Coordinate DPW Forestry Section to train chain saw operators, phone 4-5070.

(15) Ensure Repair & Utility (R&U) NCOs attend required training, which addresses winter issues such as changing heater unit filters and acquiring ice melting agent for use on steps and sidewalks, by 1 Nov 10; phone 4-7879 to schedule training.

(16) Ensure holiday season Exodus plan addresses safety issues concerning travel, cold weather, alcohol and drug use, and winter sports activities.

(17) Make decisions on the authorization to operate unit government-owned vehicles during periods of increased road condition classification. Road condition classifications are in paragraphs 4c(1)(a-d) of this memorandum. The following decision guidelines apply:

(a) AMBER. 0-3 level commanders/directors.

(b) RED/BLACK. 0-5 level commanders/directors.

(18) Family and community safety is part of the winter safety campaign. The following "off-duty" issues must be included in your winter season loss prevention program:

(a) *Snow and Ice Removal From Steps and Sidewalks in Housing Areas.* Pre-position ice-melt in all family housing units. Residents of Knox Hills may obtain ice melt for family

housing by visiting their neighborhood community center. Know your limits when shoveling snow and rest often; overexertion can cause strains, sprains, and heart attacks.

(b) *Skiing, Skating, and Other Winter Sports.* Lakes and ponds on Fort Knox and surrounding areas do not freeze enough to support a person's weight; ensure this information is publicized. All Fort Knox bodies of water are off limits to winter sports such as ice-skating. Follow common sense rules when skiing, snow boarding, ice-skating, and snowmobiling; never exceed your capabilities. Range Division releases lands for recreational events to Hunt Control. All recreational activities in the training complex must be cleared through Hunt Control before personnel enter the training complex.

(c) *Hunting.* Although hunting is a year around sport, hazards associated with the winter season increase risk. Cold weather, snow and ice, poor footing, and reduced visibility all require close consideration to ensure hunter's safety. Hunting is not allowed on any portion of the Knox Hills' footprint at Fort Knox.

(d) *Privately-Owned Vehicle (POV) Travel.* Always carry a winter "car survival kit," e.g., blanket, extra clothing, nourishment and water, a high visibility marker, flash light/flashing light, and a shovel, when traveling to areas where there could be snow/ice storms. Before long trips, check road and weather conditions at the following web page (<http://www.weather.com>). Ensure your POV is prepared for the winter season; check exhaust system, wipers, antifreeze, heater/defroster, tires, and brakes.

(e) *Holiday Lighting.* Use only lighting with Underwriters Laboratory label. Never install lighting outdoors that is designed for indoor use. Inspect and repair all electrical wiring and extension cords before installation. Use caution when installing to prevent falls.

(f) *Furnace Filters.* Knox Hills residents must change/clean furnace filters monthly as indicated in the Knox Hills Resident Guidelines. Dirty filters lead to improper operation of the furnace and may result in fire or carbon monoxide poisoning. Knox Hills residents may obtain filters from the neighborhood community office.

(g) *Carbon Monoxide (CO).* Homes, to include those off-post, must be inspected before heating season to ensure heating systems and gas-fired appliances are properly vented. Contact DPW Housing Division for inspection and repair of on-post housing; off-post residents should have homes inspected by a qualified technician and ensure identified problems are corrected immediately. Never use propane, charcoal or other unauthorized fuel to heat buildings or tents; also, never leave a vehicle running in a closed garage, and if you must sit in a vehicle with the engine running outside, open a window for ventilation.

5. Preventing accidents and injuries during the winter season is a challenge which requires top to bottom support; it is not just a commander's program. Individual Soldiers and civilian employees must assume some responsibility, e.g., adjust driving behavior to road conditions,

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dress according to weather conditions, inspect facilities and equipment for hazards that may produce fires or carbon monoxide poisoning.

for *Eric C. Schwartz* *CAR. Dep*
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